

IN THE CLAIMS

Please amend the claims as indicated below.

1. (Currently amended) A computer-implemented method of planning orthopaedic surgery, comprising:
 - providing a library of templates representing orthopaedic prostheses;
 - displaying a patient image showing anatomical features that are relevant for the orthopaedic surgery being planned;
 - scaling the patient image according to user input;
 - displaying over the patient image a geometrical construct comprising a plurality of interrelated shapes and lines defined by a plurality of interrelated geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;
 - allowing a user to reconfigure the geometrical construct by adjusting the geometric parameters according to the anatomical features of the underlying patient image so as to specify a mapping of bone structure shown in the patient image; and
 - automatically selecting at least one template from the library in accordance with the geometric parameters adjusted by the user.
2. (Original) The method of claim 1, wherein the patient image is an X-ray image.
3. (Original) The method of claim 1, wherein the geometric parameters include lengths and/or angles.
4. (Currently amended) The method of claim 1, and further comprising, before automatically selecting:
 - displaying a further patient image showing anatomical features that are relevant for the orthopaedic surgery being planned;
 - scaling the further patient image according to user input;

displaying over the further patient image a further geometrical construct defined by a plurality of interrelated further geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library; and

allowing a user to reconfigure the further geometrical construct by adjusting the further geometric parameters according to the anatomical features of the underlying further patient image so as to specify a mapping of bone structure shown in the further patient image;

and wherein automatically selecting at least one template is in accordance with the geometric parameters and the further geometric parameters adjusted by the user.

5. (Original) The method of claim 4, wherein the patient image is an anterior-posterior view and the further patient image is a medio-lateral view.
6. (Previously presented) The method of claim 1, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to allow automatic selection of a template representing a femoral component of a hip prosthesis.
7. (Previously presented) The method of claim 1, wherein the geometric parameters are adjusted according to anatomical features of a pelvis so as to allow automatic selection of a template representing an acetabular component of a hip prosthesis.
8. (Previously presented) The method of claim 4, wherein the geometric parameters and the further geometric parameters are adjusted according to anatomical features of a knee joint so as to allow automatic selection of templates representing femoral and tibial components of a knee prosthesis.
9. (Currently amended) A computer-implemented method of planning orthopaedic surgery, comprising:
 - providing a library of templates representing orthopaedic implants;

displaying first and second patient images showing anatomical features that are relevant for the orthopaedic surgery being planned;

scaling the first and second patient images according to user input;

displaying over the first patient image a first view of a geometrical construct, the geometrical construct comprising a plurality of interrelated shapes and lines being defined by a plurality of geometric parameters interrelated in three dimensions, the geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;

displaying over the second patient image a second view of the geometrical construct;

allowing a user to reconfigure the geometrical construct according to the anatomical features of the underlying patient images so as to specify a mapping of the bone structure shown in the first and second patient images, by adjusting geometric parameters adjustable in the first and second views; and

automatically selecting at least one template from the library in accordance with the geometric parameters adjusted by the user.

10. (Original) The method of claim 9, wherein the first patient image is an anterior-posterior view and the second patient image is a medio-lateral view.

11. (Previously presented) The method of claim 9, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to allow automatic selection of a template representing a femoral component of a knee prosthesis.

12. (Previously presented) The method of claim 9, wherein the geometric parameters are adjusted according to anatomical features of a tibia so as to allow automatic selection of a template representing a tibial component of a knee prosthesis.

13. (Previously presented) The method of claim 9, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to allow automatic selection of a template representing a femoral component of a hip prosthesis.

14. (Currently amended) A computer-readable medium having stored thereon computer-readable instructions for implementing a method of planning orthopaedic surgery, comprising:

- providing a library of templates representing orthopaedic prostheses;

- displaying a patient image showing anatomical features that are relevant for the orthopaedic surgery being planned;

- scaling the patient image according to user input;

- displaying over the patient image a geometrical construct comprising a plurality of interrelated shapes and lines defined by a plurality of interrelated geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;

- allowing a user to reconfigure the geometrical construct by adjusting the geometric parameters according to the anatomical features of the underlying patient image so as to specify a mapping of the bone structure shown in the patient image; and

- automatically selecting at least one template from the library in accordance with the geometric parameters adjusted by the user.

15. (Previously presented) The computer-readable medium of claim 14, wherein the patient image is an X-ray image.

16. (Previously presented) The computer-readable medium of claim 14, wherein the geometric parameters include lengths and/or angles.

17. (Currently amended) The computer-readable medium of claim 14, and further comprising, before automatically selecting:

displaying a further patient image showing anatomical features that are relevant for the orthopaedic surgery being planned;

scaling the further patient image according to user input;

displaying over the further patient image a further geometrical construct defined by a plurality of interrelated further geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library; and

allowing a user to reconfigure the further geometrical construct by adjusting the further geometric parameters according to the anatomical features of the underlying further patient image so as to specify a mapping of the bone structure shown in the further patient image;

and wherein automatically selecting at least one template is in accordance with the geometric parameters and the further geometric parameters adjusted by the user.

18. (Previously presented) The computer-readable medium of claim 17, wherein the patient image is an anterior-posterior view and the further patient image is a medio-lateral view.

19. (Previously presented) The computer-readable medium of claim 14, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to allow automatic selection of a template representing a femoral component of a hip prosthesis.

20. (Previously presented) The computer-readable medium of claim 14, wherein the geometric parameters are adjusted according to anatomical features of a pelvis so as to allow automatic selection of a template representing an acetabular component of a hip prosthesis.

21. (Previously presented) The computer-readable medium of claim 17, wherein the geometric parameters and the further geometric parameters are adjusted according to

anatomical features of a knee joint so as to allow automatic selection of templates representing femoral and tibial components of a knee prosthesis.

22. (Currently amended) A computer-readable medium having stored thereon computer-readable instructions for implementing a method of planning orthopaedic surgery, comprising:

- providing a library of templates representing orthopaedic implants;

- displaying first and second patient images showing anatomical features that are relevant for the orthopaedic surgery being planned;

- scaling the first and second patient images according to user input;

- displaying over the first patient image a first view of a geometrical construct, the geometrical construct comprising a plurality of interrelated shapes and lines being defined by a plurality of geometric parameters interrelated in three dimensions the geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;

- displaying over the second patient image a second view of the geometrical construct;

- allowing a user to reconfigure the geometrical construct according to the anatomical features of the underlying patient images so as to specify a mapping of the bone structure shown in the first and second patient images, by adjusting geometric parameters adjustable in the first and second views; and

- automatically selecting at least one template from the library in accordance with the geometric parameters adjusted by the user.

23. (Previously presented) The computer-readable medium of claim 22, wherein the first patient image is an anterior-posterior view and the second patient image is a medio-lateral view.

24. (Previously presented) The computer-readable medium of claim 22, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to

allow automatic selection of a template representing a femoral component of a knee prosthesis.

25. (Previously presented) The computer-readable medium of claim 22, wherein the geometric parameters are adjusted according to anatomical features of a tibia so as to allow automatic selection of a template representing a tibial component of a knee prosthesis.

26. (Previously presented) The computer-readable medium of claim 22, wherein the geometric parameters are adjusted according to anatomical features of a femur so as to allow automatic selection of a template representing a femoral component of a hip prosthesis.

27. (Previously presented) The computer-readable medium of claim 14 or claim 22, wherein the computer-readable instructions are stored in a recording medium.

28. (Previously presented) The computer-readable medium of claim 14 or claim 22, wherein the computer-readable instructions are conveyed on a transmission medium.

29. (Currently amended) A computer system for implementing a method of planning orthopaedic surgery, comprising:

- memory in which is stored:

- a library of templates representing orthopaedic prostheses; and

- patient images showing anatomical features that are relevant for the

orthopaedic surgery being planned;

- a display device operable to display one of the patient images; and

- a processor operable to:

- scale the displayed patient image according to user input;

- display over the patient image a geometrical construct comprising a

plurality of interrelated shapes and lines defined by a plurality of interrelated geometric

parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;

allow a user to reconfigure the geometrical construct by adjusting the geometric parameters according to the anatomical features of the displayed patient image so as to specify a mapping of the bone structure shown in the patient image; and

automatically select at least one template from the library in accordance with the geometric parameters adjusted by the user.

30. (Currently amended) The computer system of claim 29, wherein the display device is further operable to display a further one of the patient images; and

the processor is further operable to:

scale the displayed further patient image according to user input;

display over the further patient image a further geometrical construct defined by a plurality of interrelated further geometric parameters corresponding to parameters describing the orthopaedic prostheses represented by the templates in the library;

allow a user to reconfigure the further geometrical construct by adjusting the further geometric parameters according to the anatomical features of the displayed further patient image so as to specify a mapping of the bone structure shown in the further patient image; and

automatically select at least one template from the library in accordance with the geometric parameters and the further geometric parameters adjusted by the user.

31. (Currently amended) A computer system for implementing a method of planning orthopaedic surgery, comprising:

memory in which is stored:

a library of templates representing orthopaedic prostheses; and

patient images showing anatomical features that are relevant for the orthopaedic surgery being planned;

a display device operable to display a first and a second of the patient images; and
a processor operable to:

scale the displayed patient images according to user input;

display over the first patient image a first view of a geometrical construct,
the geometrical construct comprising a plurality of interrelated shapes and lines being
defined by a plurality of geometric parameters interrelated in three dimensions
corresponding to parameters describing the orthopaedic prostheses represented by the
templates in the library;

display over the second patient image a second view of the geometrical
construct;

allow a user to reconfigure the geometrical construct according to the
anatomical features of the underlying patient images so as to specify a mapping of the bone
structure shown in the first and second patient images, by adjusting geometric parameters
adjustable in the first and second views; and

automatically select at least one template from the library in accordance
with the geometric parameters adjusted by the user.

32. (Previously presented) The computer system of claim 29 or claim 31, wherein the
library of templates is stored such that it can be accessed by the processor via the Internet.

33. (Previously presented) The computer system of claim 29 or claim 31, wherein the
patient images are stored in an archive comprised within a Picture Archiving and
Communication System.